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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/603,753
Filing Date: June 25, 2003
Appellant(s): WILLOUGHBY, CHARLES T.

Mr. John G. Posa
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 13, 2005 appealing from the Office action mailed August 3, 2005.

(1) Real party in interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and interferences

The statement identifying the related appeals and interferences, which will be directly affected or be directly affected or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of the amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues contained in the brief is correct.

(7) Grouping of Claims

The appellant's statement of the grouping of claims contained in the brief is correct.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix A the brief is correct.

(9) Prior Art of Record

Li et al.	(US Patent No.: 5,430,620)	July 4, 1995
Mori	(US Patent No.: 4,428,031)	January 24, 1984

Belfer. (US Patent No.: 6,234,640 B1) May 22, 2001

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 1-4 and 7 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. Patent No. 5,430,620) in view of Mori (U.S. Patent No. 4,428,031).

Regarding Claim 1, Li ('620) discloses an illuminator (Figures 1a-1c) comprising:

- a housing 6 including a hollow interior 15 with a light receiving end 7 and a light projecting end bearing a fresnel lens 9 (Figure 2b, column 7, lines 49-53 and 65-68);
- an fiber optic 1 carrying light from a light source, remotely located, (not shown) into the interior of the housing 6 through the light receiving end 7 (Figure 2b, column 7, lines 49-53 and 65-68);
- the fresnel lens 9 mounted on the light projecting end of the housing (Figure 2b, column 7, lines 49-53); and
- a mechanism 3 for mounting the illuminator housing on the wearer's head, (Figures 1a-1c, column 12, lines 3-14).

Although, Li ('620) discloses a head wearable illuminator with a fresnel lens, Li ('620) does not specifically teach the fresnel lens having one set of its grooves facing the interior of the housing.

On the other hand, Mori ('031) discloses an illuminator (Figure 2) comprising the fresnel lens 2 mounted on the light projecting end of the housing 20 (Figure 2, column 3, lines 10-12); and one of the two sides of the fresnel lens 2 bearing a set of grooves facing exterior of the housing 2 (Figure 2, column 4, lines 3-7). In addition, Mori ('031) allows positioning of the fresnel lens 2 with its surface with grooves facing the interior of the housing (Figure 2, column 4, lines 15-19).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the an illuminator of Li et al. ('620) positioning the fresnel lens with its grooves facing the interior of thee housing taught by Mori ('031) for benefit and advantage minimizing interference fringes on refracted light rays.

Regarding claims 2-4 and 7, Li ('620) in view of Mori ('031) discloses the illuminator further comprising:

- the projecting end – the end bearing a fresnel lens 9 - of the housing movable forward and backward relative to the light receiving end 7 (Li, Figures 1b and 1c, column 8, lines 27-30);
- the light projecting end bearing the fresnel lens 9, and the light receiving end 7 being connected with a threaded coupling 8 enabling the light projecting end to be moved forward and backward relative to the relative to the light receiving end 7 (Li, Figures 1b and 1c, column 8, lines 22-30); and
- the fresnel lens 2 made of acrylic – transparent plastic – (Mori, Figure 2, column 2, lines 7-11); and

- the mechanism 3 allowing mounting of the housing on the wearer's head, (Figures 1a-1c, column 12, lines 3-14).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. Patent No. 5,430,620) in view of Mori (U.S. Patent No. 4,428,031) as applied to Claim 1 above, and further in view of Belfer (U.S. Patent No.: 6,234,640 B1).

Li ('620) in view of Mori ('031) discloses the illuminator further comprising a cylindrical housing. However, neither combined nor individual teaching of Li ('620) and Mori ('031) discloses an illuminator having a conical housing.

On the other end, Befler ('640 B1) discloses a fiber optic replicant lamp 20 including a housing 20 with a conical light-projecting end (Figures 2a-2c).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the an illuminator of Li ('620) in view of Mori ('031) by providing the housing with a conical light projecting end as taught by Befler ('640 B1) for benefit and advantage of a large projection area for illumination.

(11) Response to Arguments

Argument: Regarding Claims 1-5 and 7, the appellant disagrees with the Examiner calling the limitation "a mechanism for mounting the illuminator housing to a wearer's head obvious for the benefits of advantage of dynamic adjustment for the field of illumination".

Response: In the Final office action, the Examiner has not made either direct or indirect statement reflecting "a mechanism for mounting

the illuminator housing to a wearer's head" obvious for the benefits of advantage of dynamic adjustment for the field of illumination" indicated in the above argument.

Argument: The fresnel lens included in the illumination device of Mori ('031) is sized and shaped for an illumination device used for illumination of the interior of a room illumination. As the illumination device disclosed by Mori (031) is intended for permanent installation in a room, it would never be head worn. Therefore, the references are not sufficient to render the claims prima facie obviousness.

Response: The appellant is completely silent about the primary reference Li et al. (US Patent No.: 5,430,620), which is the basis for the rejections of claims 1-4 and 7.

As detailed in section 3 of the Final office action, Li ('620) discloses an illuminator (Figures 1a-1c) meeting all limitation of Claim 1, except those detailed below, Claim 1.

Although, Li ('620) discloses a head wearable illuminator with a fresnel lens, Li et al. ('620) does not specifically teach the fresnel lens having one set of its grooves facing the interior of the housing.

On the other hand, Mori ('031) discloses an illuminator (Figure 2) comprising the fresnel lens 2 mounted on the light projecting end of the housing 20 (Figure 2, column 3, lines 10-12); and one of the two sides of the fresnel lens 2 bearing a set of grooves facing exterior of the housing 2 (Figure 2, column 4, lines 3-7). In addition, Mori ('031) allows positioning of the fresnel lens 2 with its surface with grooves facing the interior of the housing (Figure 2, column 4, lines 15-19).

Note: the device of Li et al. (620) is modified by positioning the grooves of the fresnel lens facing the interior of the housing as taught by Mori ('031).

Therefore, the argument based on only the secondary reference (Mori ('031) is baseless.

Further, above detailed response is equally applicable to the argument made on Claim 5.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Sandra O'Shea

December 22, 2005

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Conferees:

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